

Honors Geometry
Unit 6 Assignment Sheet

Right Triangle Trigonometry

| Day | Date | Topics | Homework |
|-----|-----------------|---|--|
| 1 | Wed., 3/28 | 7-2: Pythagorean Theorem & its Converse 7-3: Special Right Triangles | p. 360 6, 12, 16, 22, 24, 26, 36 p. 369 6, 8, 12, 14, 20, 26, 28, 32, |
| 2 | Thurs., 3/29 | 9-1: Sine, Cosine, & Tangent functions 9-2: Finding angles with trig functions | p. 472 2, 6, 10, 12, 18, 20, 22, 28, 32, 36 p. 479 2, 8, 10, 16, 22, 24, 38 |
| 3 | Fri., 3/30 | Quiz | |
| | | <i>Spring Break!</i> ☺ | |
| 4 | Tues., 4/10 | Review days 1 and 2 9-3: Angles of elevation & depression | p. 484 2-8 E, 10, 14, 18, 20, 21, 24, 28 |
| 5 | Wed., 4/11 | Law of Sines/Cosines | Worksheet |
| 6 | Thurs., 4/12 | Review | Finish review & STUDY!! |
| 7 | Fri., 4/13 | Unit 6 Test | |

Extra Practice:

- Chapter Review p. 505 1-46 all; omit 5 & 32
- Ex Practice p. 698 1-22
(13-16 are long; do 2 in this section)

Unit 6 Notes:

Theorem: The area of a triangle is one-half the product of the two sides and the sine of the included angle.

$$A = \frac{1}{2}bc \sin \angle A$$

45°-45°-90° Right Triangle Relationships:

Legs: are equal

Hypotenuse: $\text{leg} \cdot \sqrt{2}$

30°-60°-90° Right Triangle Relationships:

Shorter Leg: x

Longer Leg: $x \cdot \sqrt{3}$ (shorter leg times $\sqrt{3}$)

Hypotenuse: $2x$ (twice the shorter leg)

Trigonometric Functions:

$$\text{Sine } \angle A = \frac{\text{length of side opposite } \angle A}{\text{length of hypotenuse}} \quad (\sin \angle A)$$

$$\text{Cosine } \angle A = \frac{\text{length of side adjacent to } \angle A}{\text{length of hypotenuse}} \quad (\cos \angle A)$$

$$\text{Tangent } \angle A = \frac{\text{length of side opposite } \angle A}{\text{length of side adjacent to } \angle A} \quad (\tan \angle A)$$

SOH-CAH-TOA

Oscar Has A Heap Of Apples

Angle of elevation:

The angle formed by a horizontal line and the line of sight to an object at a higher level

Angle of depression:

The angle formed by a horizontal line and the line of sight to an object at a lower level.

Law of Sines: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$ or $\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$

Law of Cosines: $a^2 = b^2 + c^2 - (2bc)\cos A$